

PMC-EF2a

(20102)

**U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION**



RECIPIENT: State of North Carolina

STATE: NC

PROJECT TITLE : EECBG - Orange County Community Geothermal Phase 1

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0000771	GFO-0000771-010	0

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:**Description:**

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

Orange County is proposing to use EECBG ARRA funding to install a ground source heat pump system that will serve the heating and cooling needs for the existing 10,000 square feet of adaptively re-used interior office, common, and public meeting spaces located within the Link Government Services Center ("Link"). The ground source heat pump system will be a vertical, closed loop system with a capacity of 25 tons. There will be 15 boreholes needed drilled to a depth of 450 feet. The state certified and licensed driller will follow IGSHA and NGWA regulations during installation. The system will use HDPE piping that is heat fused and all wells will be fully grouted with a thermally enhanced bentonite grout. The design will include an approved erosion control plan that is reviewed and approved by the Orange County Erosion Control section of its Planning Department. The design will include an approved waste materials disposal plan reviewed and approved by the Orange County Department of Solid Waste. The well field site will be re-paved when the proposed project has been completed. Permits that are required and will be obtained include 1) Orange County Building Permit, complying with federal, state and local building codes; 2) an Orange County well drilling permit issued by the Orange County Department of Environmental Health; and 3) a Town of Hillsborough Zoning Compliance Permit that complies with local zoning codes.

The geothermal well field portion of the installation will occur in a paved parking lot adjacent to the building. The proposed project location is in a developed commercial and residential area of Hillsborough, NC. The County will engage an appropriate, third party cultural and archaeological resource consultant to confirm that the well area to be installed under existing parking pavement does not impact any cultural resources. The original facility was built in 1992—at that time, a Cultural and Archaeological study was performed and yielded no impacts prior to the facilities. There are not expected to be any adverse effects to threatened and endangered species, wetlands, floodplains, or cultural resources as a result of the proposed project.

After a thorough review of the information submitted for the proposed project, it has been determined that the actions involved will not have a significant impact to human health and /or the environment. The proposed project will result in a reduction in the use of conventional fossil fuels; therefore it is hereby Categorical Excluded B5.1 "actions to conserve energy," from further NEPA review.

NEPA PROVISION

Note to Specialist :

EF-2a completed by Logan Sholar

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

NEPA Compliance Officer

Date: _____

10/8/10

FIELD OFFICE MANAGER DETERMINATION☐ Field Office Manager review required**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

- ☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- ☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____